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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,343	12/29/2000	Jin Li	2069.009900	2045

23720 7590 12/11/2003

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EXAMINER

HAROLD, JEFFEREY F

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 12/11/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/753,343

Applicant(s)

LI, JIN

Examiner

Jefferey F. Harold

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-15, 19-22 and 24-26 is/are rejected.
- 7) ☒ Claim(s) 6-8, 16-18 and 23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. ***Claims 1-3, 5, 9-15, 19-22, and 24-26*** are rejected under 35 U.S.C. 102(b) as being anticipated by Zhou (United States Patent 5,583,934).

Regarding **claim 1**, Zhou discloses DC level control for an electronic telephone line card. In addition, Zhou discloses a line card that includes an electronic SLIC for performing BORSCHT functions. Further, BORSCHT functions include ringing current supply, which reads on claimed “transmitting a signal having an AC component to a subscriber line”; inherently receiving at least a portion of the transmitted signal from the subscriber line; supervision of the line card, which reads on claimed “determining at least a portion of a period of the AC component of the received signal” and inherently performing a function of a line card in response to determining at least the portion of the period of the AC component, as disclosed at column 1, lines 31-39 and column 3, line 61 through column 4, line 8 and exhibited in figure 1.

Regarding **claim 2**, Zhou discloses everything claimed as applied above (see claim 1), in addition, Zhou discloses wherein the signal is a ringing signal and wherein performing the function includes performing ring-trip detection which is inherent to

supervision of the line card, as disclosed at column 1, lines 31-39 and column 3, line 61 through column 4, line 8 and exhibited in figure 1.

Regarding **claim 3**, Zhou discloses everything claimed as applied above (see claim 1), in addition, Zhou discloses wherein the signal is a fault detection signal and wherein performing the function includes performing AC fault detection which is inherent to supervision of the line card, as disclosed at column 1, lines 31-39 and column 3, line 61 through column 4, line 8 and exhibited in figure 1.

Regarding **claim 5**, Zhou disclose transmitting a signal having at least one of the AC component and a DC component to a subscriber line; inherently receiving at least a portion of the transmitted signal from the subscriber line; filtering the DC component from the received path; supervision of the line card, which reads on claimed "determining a value proportional to a power of the AC component of the received signal over at least a portion of a period of the AC component" and inherently performing a function of a line card in response to determining the value proportional to the power of the AC component, as disclosed at column 1, lines 31-39 and column 3, line 61 through column 4, line 8; claim 1 and exhibited in figure 1.

Regarding **claims 9 and 10**, Zhou discloses everything claimed as applied above (see claim 5), in addition claims 9 and 10 are interpreted and thus rejected for the reasons set forth above in the rejection of claims 2 and 3.

Regarding **claims 11-15, 19-22, and 24-26**, Zhou discloses everything claimed, in addition, claims 11-15, 19-22 and 24-26, are interpreted and thus rejected for the reasons set forth above in the rejection of claims 1-2 and 5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou in view of Baqai et al (United States Patent 6,553,443), hereinafter referenced as Baqai.

Regarding **claim 4**, Zhou discloses everything claimed as applied above (see claim 1), in addition Zhou discloses determining at least the portion of the period, however, Zhou fails to disclose wherein the period includes determining at least one zero crossing of the AC component. However, the examiner maintains that it was well known in the art to provide wherein the period includes determining at least one zero crossing of the AC component, as taught by Baqai.

In a similar field of endeavor Baqai discloses a method and apparatus for prioritizing interrupts in a communication system. In addition, Baqai discloses wherein line card (105) includes determining at least one zero crossing of the AC component, as disclosed at column 3, lines 6-57 and exhibited in figure 1.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Zhou by specifically providing wherein the period includes determining at least one zero crossing of the AC component, as taught by Baqai, for the purpose of determining the status of the line.

Allowable Subject Matter

3. ***Claims 6-8, 16-18 and 23*** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferey F. Harold whose telephone number is (703) 306-5836. The examiner can normally be reached on Monday-Friday 9:30am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4800.

JFH
December 5, 2003


XU MEI
PRIMARY EXAMINER